



Performance Through Carbon Chemistry

Technical Data Sheet

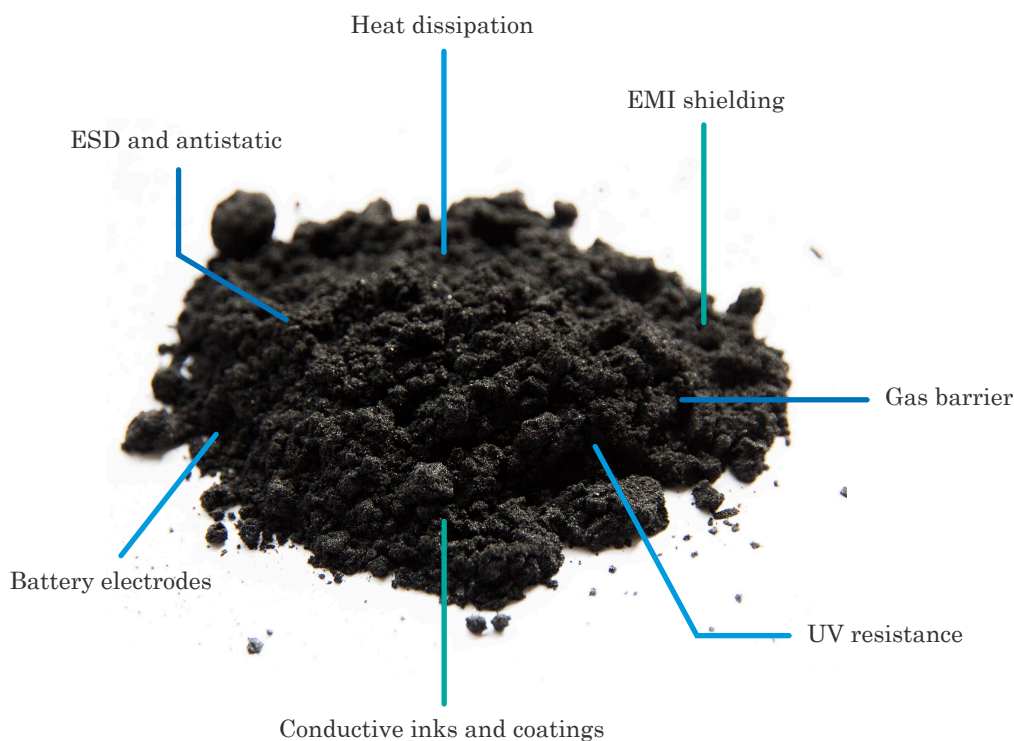
GrapheneBlack™ 3X



Meet GrapheneBlack™ 3X:

the low-cost, high-performance graphene powder.

GrapheneBlack™ 3X is a versatile and low-cost graphene powder with average flake size of 40 µm. Typical applications include:



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Physical and chemical properties

Physical properties

Property	Value
Particle size (laser diffraction)	D50=38 µm
Number of layers*	6 –10
Bulk density	0.18 g/cm ³
Appearance	Black fluffy powder
Odor	Odorless
Solubility	Insoluble
Moisture (TGA)	<0.7 wt%
Ash content (TGA)	< 6 wt%
Peak decomposition temperature	750°C

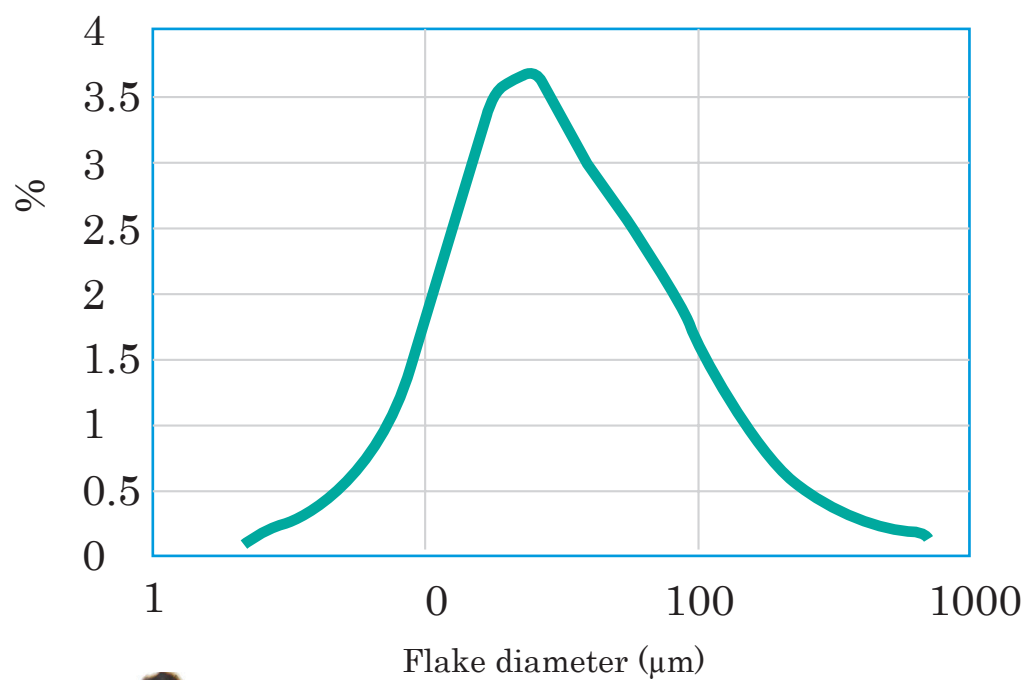
* Up to 90% of flakes within this range.

Chemical composition

Element	Value
Carbon	>91 at.%
Oxygen	< 7 at.%
Sulfur	< 0.5 at.%
Metal impurities	<2 at.%

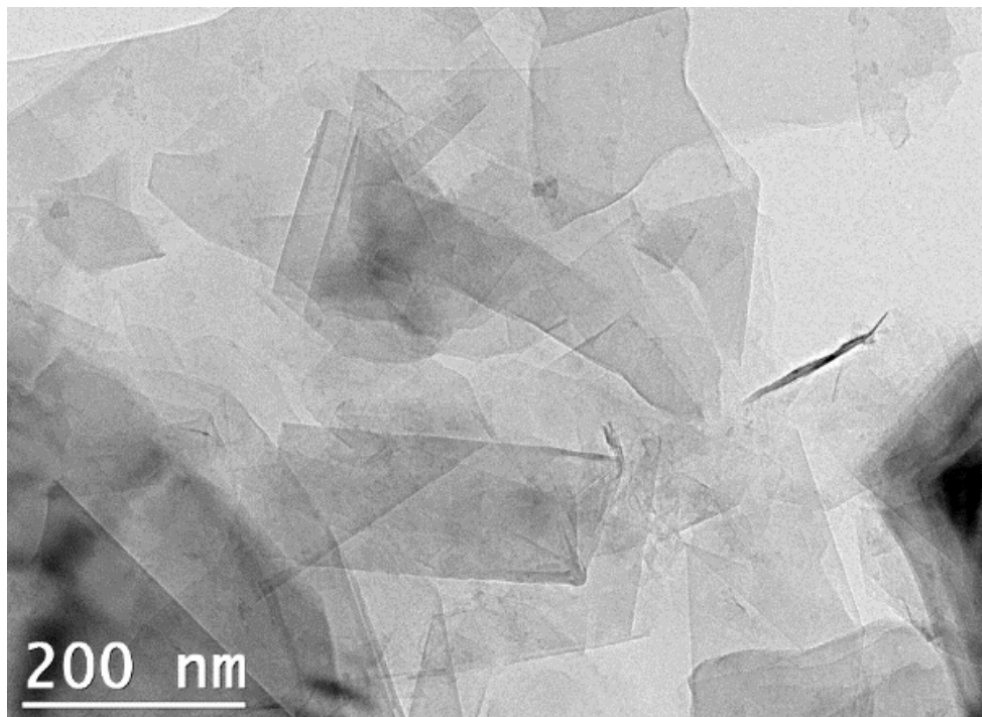
Elemental content derived from X-Ray Photoelectron Spectroscopy (XPS) and the Energy Dispersive X-ray spectroscopy (EDS) analysis.

Particle size distribution



Electron microscopy

Few-layer GrapheneBlack™ 3X flakes under TEM.



Electron micrograph (TEM) shows various few-layer thick flakes with thicknesses mainly ranging from 6 to 10 layers.

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